

In the Claims

Claims 1, 7, 11, 19, 21 and 25 are amended.

Claims 5, 6, 8, 16, 17, 18, 20, 23 and 24 are canceled without prejudice.

Claims 1-4, 7, 9-15, 19, 21, 22 and 25-26 remain in the application and are listed as follows:

1. (Currently Amended) A method of generating a development project including at least a matrix switch and one or more adjacent objects, the method comprising:

establishing an initial rendering of the development project; and

negotiating buffer size and attribute characteristics between an input/output of the matrix switch and an input/output of adjacent objects, wherein negotiated buffers are utilized to communicate media content between the matrix switch and adjacent buffers by sharing a common buffer between inputs and outputs,

wherein the matrix switch attempts to be an allocator for buffers shared with each of its input(s) and output(s) and wherein if the matrix switch cannot be an allocator for one or more of its input(s) or output(s), such input(s) and output(s) do not share a common buffer with objects coupled thereto, and

wherein the development project is a media processing project rendered as a filter graph of processing chains.

2. (Original) A method according to claim 1, further comprising modifying input/output associations between objects in the initial rendering of the development project based at least in part on the negotiation.

1 3. (Previously Presented) A method according to claim 2, wherein
2 input/output associations are communicative connections through one or more
3 buffers.

4
5 4. (Original) A method according to claim 1, wherein the initial
6 rendering of the development project included a separate buffer for each input and
7 output of each object within the project, some of which are replaced with a single
8 buffer shared between select input(s) and output(s) based, at least in part, on the
9 negotiation.

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11 5. (Canceled).

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13 6. (Canceled).

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15 7. (Currently Amended) A method according to claim [[6]] 1, wherein
16 memory copy operations are utilized to communication information to/from
17 input(s) and/or output(s) of the matrix switch for which the switch is not the
18 allocator.

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20 8. (Canceled)

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22 9. (Original) A storage medium comprising a plurality of executable
23 instructions which, when executed, implement a method of claim 1.

24
25 10. (Original) A computing system comprising:

1 a storage medium having stored therein a plurality of executable
2 instructions; and

3 an execution unit, coupled to the storage medium, to execute at least a
4 subset of the plurality of executable instructions to implement a method according
5 to claim 1.

6
7 11. (Currently Amended) A development system comprising:

8 one or more processing chains; and

9 a matrix switch, coupled to the one or more processing chains, to
10 recursively pass content received from the one or more processing chains through
11 one or more processing objects to implement a development project, wherein the
12 matrix switch negotiates buffer size and attributes between the matrix switch and
13 adjacent objects, wherein the negotiated buffers are utilized to communicate media
14 content between the matrix switch and adjacent buffers without requiring a buffer
15 copy operation,

16 wherein the matrix switch negotiates to be an allocator of buffers between
17 the matrix switch and any object coupled to its input and output to facilitate
18 communication between the matrix switch and external objects as well as between
19 its input(s) and output(s) without the need for a memory copy operation,

20 wherein if the matrix switch is not able to be an allocator of a buffer for an
21 input or an output of the matrix switch, a memory copy operation will be required
22 to communicate with that input or output, and

23 wherein a memory copy operation is required to communicate information
24 to/from an matrix switch input and/or output for which the matrix switch is not an

1 allocator of a buffer associated with that input and/or output, even if the
2 communication is internal to the matrix switch itself.
3

4 12. (Original) A development system according to claim 11, wherein
5 each of the objects comprising the one or more processing chains attempt to
6 negotiate buffer size and attribute characteristics in order to facilitate a shared
7 buffer for communicating information between the objects of the processing chain.
8

9 13. (Original) A development system according to claim 12, wherein the
10 objects establish shared buffers between an input of one object and the output of
11 an upstream object upon negotiating mutually acceptable buffer size and attribute
12 characteristics.
13

14 14. (Original) A development system according to claim 11, wherein the
15 development project is established by a render engine, exposed from an operating
16 system executing on a computing system implementing the development system.
17

18 15. (Original) A development system according to claim 14, wherein the
19 render engine facilitates negotiation between objects of the processing chains of
20 buffer size and attribute requirements, and establishes a shared buffer for
21 communicating content between objects when an agreement as to the requirements
22 is achieved.
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24 16. (Canceled).
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1 17. (Canceled).

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3 18. (Canceled).

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5 19. (Currently Amended) A matrix switch object comprising:
6 a dynamically determined number of inputs to receive content from one or
7 more processing chains; and

8 a dynamically determined number of outputs, selectively coupling one or
9 more of the dynamically determined inputs to one or more of the dynamically
10 determined outputs, wherein a matrix switch negotiates with objects coupled to
11 each of the dynamically determined inputs and outputs for buffer size and attribute
12 requirements to facilitate communication between objects and within the matrix
13 switch using a shared buffer of agreed upon size and attribute characteristics,

14 wherein if the matrix switch cannot negotiate an agreed upon buffer size
15 and attribute characteristics between an input/output and an object coupled to the
16 input/output, communication with the input/output is performed using a memory
17 copy operation.

18 wherein if an input/output of the matrix switch and an input/output of an
19 object coupled to the input/output of the matrix switch do agree upon buffer size
20 and attribute requirements, communication between the object and the matrix
21 switch will be through a shared buffer coupling the input/output of the object to
22 the input/output of the switch.

23 wherein communication between the input/output of the matrix switch and
24 a second input/output of the matrix switch will be through a shared buffer, unless
25

1 the second input/output does not adhere to the agreed upon buffer size and
2 attribute requirements.

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4 20. (Canceled).

5
6 21. (Currently Amended) A matrix switch object according to claim
7 [[20]] 19, wherein an input/output coupling the object to the input/output of the
8 matrix switch each have an independent buffer, wherein communication occurs
9 between the object and the matrix switch by copying content from one buffer to
10 another buffer.

11
12 22. (Original) A matrix switch object according to claim 19, wherein
13 communication between the input/output of the matrix switch and any other
14 input/output, internal or external to the matrix switch is performed using a
15 memory copy operation.

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17 23. (Canceled).

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19 24. (Canceled).

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21 25. (Currently Amended) A matrix switch according to claim [[20]] 19,
22 wherein matrix switch identifies buffer size and attribute requirements of all
23 objects coupled to an input/output of the matrix switch, and attempts to negotiate a
24 common buffer size and attribute requirement for all switch input(s) and output(s).

1 26. (Original) A matrix switch according to claim 19, further comprising
2 a plurality of buffers, shared between the dynamically determined inputs and the
3 dynamically determined outputs to buffer processed media content for subsequent
4 use by objects coupled to the matrix switch.
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